

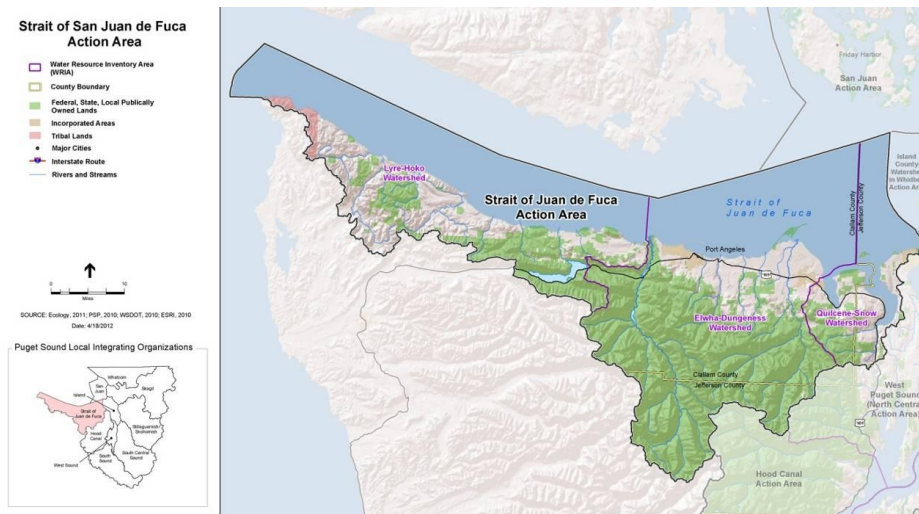
The Action Agenda in the Strait of Juan de Fuca

Profile

The Strait of Juan de Fuca (Action Area and geographic area for the Local Implementing Organization) includes the waters and associated watersheds from the northwestern tip of the Olympic Peninsula (Cape Flattery) to the eastern end of the Strait of Juan de Fuca (Point Wilson at Port Townsend). It is home to the Makah, Lower Elwha Klallam and Jamestown S’Klallam Nations and tribal reservations, Clallam and Jefferson counties, the cities of Port Townsend, Port Angeles, and Sequim, and much of Olympic National Park and Olympic National Forest.

The Strait of Juan de Fuca is the bridge between inner Puget Sound and the Pacific Ocean. It provides an essential pathway for exchange of incoming cold, dense saltwater and the circulation of freshwater runoff from Puget Sound and Georgia Basin rivers. This exchange, assisted by strong ocean currents in the western Strait and intense tidal action in the eastern end prevents the marine waters of this area from becoming stagnant.

The Strait Action Area has a rugged and diverse shoreline of 217 linear miles. The uplands are primarily forested, with most of the upper watersheds lying in federal, state, or private parks, forest or timberland. Many of the upper watersheds are in Olympic National Park. In other places, commercial



timber harvest remains an important economic sector, supporting an active paper mill in Port Angeles. More than three-quarters of the private land west of the Elwha watershed is zoned for commercial forest, and portions of the western Strait are in their third rotation for timber harvest. Agriculture also is part of the rural landscape along the Strait, with approximately 5,000 acres of irrigated farmland in the dry Sequim-Dungeness Valley. Smaller scale agriculture occurs in other scattered areas, particularly the Salt Creek area west of Port Angeles and in the Discovery Bay watershed.

Many other economic activities in the Strait also depend directly on the Puget Sound ecosystem, and include ship building/repair, marinas, shellfish culture and harvest, commercial and recreational fishing, and tourism. A large retirement population, drawn by the relatively dry climate, scenic environment, and other community features, has shifted the eastern Strait economy toward more service-based activities. Marine transportation is hugely reliant on the Strait of Juan de Fuca, as almost all the vessels entering or leaving the seaports of Puget Sound and the Georgia Basin pass through the Strait.

Unique Ecosystem Characteristics and Assets

The Strait of Juan de Fuca is the migration and transportation corridor between Puget Sound and the Pacific Ocean for many species of fish, marine mammals, bird populations, and humans. The marine shoreline and nearshore contain the majority of Washington's coastal kelp resources. The Strait has 95 (linear) miles of floating kelp, 161 miles of non-floating kelp, and 75 miles of eelgrass. The kelp forests and eelgrass meadows provide food and cover for outbound and returning runs of salmon from all over Puget Sound, as well as birds, marine mammals, and the species they depend on. The connectivity of

kelp and eelgrass habitat in the Strait is essential to the function of the Puget Sound ecosystem. Sheltered bays, beaches and over 22 small "pocket" estuaries at the mouths of the many creeks entering the Strait also support salmon, bull trout, forage fish and shellfish.

Notable Accomplishments

Large scale restoration continues on the Dungeness River Floodplain, including multiple acquisitions for habitat protection.

Significant progress has been made on instream flow in the Dungeness area.

The Morse Creek Channel re-meander project reconnected the mid-reaches of Morse Creek with 9 acres of its historical floodplain.

Phased protection of the Pysht River floodplain through acquisition and revegetation will also open public access.

Unique populations of raptors, marine birds, Roosevelt elk, black-tailed deer and other mammals, as well as anadromous and resident fish, are found throughout the Strait. Notable bird species include the federally-protected northern spotted owl and marbled murrelet. Olympic National Park recently reintroduced the fisher, a larger relative of the weasel, which has been locally extinct for decades. The population of sea otters that migrates between the outer coast and the Strait has increased from the initial 59 animals reintroduced in 1969-1970 to 800 animals, but is still small enough to be highly vulnerable to a catastrophic event such as an oil spill. Protection Island, part of the Dungeness National Wildlife Refuge, is a critically important marine bird rookery for Puget Sound. This island and other portions of the Strait are important haul-out areas for seals and sea lions.

In 2011, the three-year process of removing the Elwha and Glines Canyon dams was started in order to restore a free-flowing Elwha river. The largest dam removal project in

US history will reopen more than 70 miles of mostly pristine spawning and rearing habitat in the Elwha River and its tributaries. Salmon populations are predicted to swell from 3,000 to nearly 400,000 as all five species of Pacific salmon return to one of the Pacific Northwest's most productive salmon streams. The Elwha is the largest watershed in Olympic National Park, and the return of salmon to this ecosystem will return marine-derived nutrients to the watershed, restoring a vital food source for the range of life that inhabits it.

Local Action Agenda Process

The Strait Ecosystem Recovery Network (ERN) is the Local Integrating Organization (LIO) for the Strait Action Area, and leads the prioritization and implementation of Action Agenda strategies in the Strait Action Area. The Strait ERN undertook an extensive and aggressive effort to complete a Strategic Plan and Work Plan to implement the Action Agenda within the Strait Action Area for the 2011-13 Biennium. As part of this process the Strait ERN began by identifying the most immediate and significant "local threats" to the entire Strait of Juan de Fuca / North Olympic Peninsula ecosystem (i.e., Strait of Juan de Fuca Action Area geography) that may best benefit from the focused support and advocacy work of the collective membership of the Strait Ecosystem Recovery Network to accomplish actions at the local, state, tribal, and federal levels (see Key Threats/Pressures list below). Using these threats as an internal guide, the Strait ERN identified a list of 25 strategic priorities and then used the regional strategy prioritization methods from "open standards" as a guide to rank six of the 25 Strategic Priorities to be of the highest priority within the 2011-13 biennium for the Strait Action Area (see Priorities list below).

Key Threats/Pressures

The Strait ERN has identified seventeen local threats to the health of the Strait of Juan de Fuca Ecosystem. These threats, as determined by the Strait ERN, are listed alphabetically below.

- Agriculture and Livestock Grazing Operations
- Air Pollution and Atmospheric Deposition
- Aquaculture
- Climate Change Induced Stressors
- Derelict Gear (and Vessels)
- Human Sewage
- Invasive Species and Other Problematic Species (Terrestrial, Freshwater, Estuarine, Marine)
- Land Use Conversions of Farms and Forests to Other Uses
- Legacy Infrastructure - Large Scale
- Legacy Toxic Contamination Sources - Large Scale
- Marine Commercial Vessel Traffic Hazards
- New Shoreline and Upland Modifications that Damage Intact Habitat and Habitat Forming Processes
- Oil and Hazardous Materials Spills - Large Scale
- Surface Water Loading and Excessive Runoff from the Built Environment
- Timber Harvest, Forest Practices, and Silvicultural Operations - Large Scale
- Unsustainable Fishing/Harvesting
- Water Withdrawals and Diversions

The Strait ERN reserves the ability to act upon each threat as the occasion arises.

Opportunities, Priorities, and Near-Term Actions

The Strait ERN identified 25 Strategic Priorities for the Strait Action Area. They ranked six of these as the highest priority for the 2011-13 biennium. These highest priorities, which are also considered to be the Near-Term Actions (NTA) for the Strait Action Area, include (in rank order):

1. **Elwha River Ecosystem Recovery** – Implement Elwha River Ecosystem Recovery Efforts and associated projects.
2. **Salmon Recovery Plans** (Puget Sound Salmon Recovery Plan, Hood Canal/ Eastern Strait of Juan de Fuca Summer Chum Recovery Plan, Puget Sound Steelhead Recovery Plan – in development) – Implement N. Olympic Peninsula Lead Entity (NOPE) for Salmon and Hood Canal Coordinating Councils Lead Entity (HCCC-LE) 3-year Work Plans.
3. **Oil Spill Prevention, Preparedness, and Response** – Implement and promote improvements in oil spill prevention, preparedness, and response programs, policies, or capabilities for the benefit of the Strait of Juan de Fuca and adjacent waters.
4. **Shoreline Master Program Updates, Implementation, and Intergovernmental Coordination** (Jefferson County, Clallam County and cities of Port Townsend, Sequim, and Port Angeles).
5. **Stormwater Management Program Updates and Implementation** (Clallam, Jefferson, Port Angeles, Sequim, and Port Townsend).
6. **Instream Flow Rules** – Adopt and/or implement Instream Flow Rules for Water Resource Inventory Areas (WRIAs) 17, 18 East, 18 West, and 19.

The additional nineteen strategic priorities (in alphabetical order) are:

- **Aquatic Resources Habitat Conservation Plans** - Develop and implement Aquatic Resources Habitat Conservation Plans (HCP)
- **Carlsborg Wastewater Treatment and Water Reuse** - Implement Carlsborg Urban Growth Area Wastewater Treatment and Water Reuse Strategy
- **Clean Water District Plans** (Sequim-Dungeness Bay & Eastern Jefferson County) - Implement Sequim-Dungeness Bay and East Jefferson County Clean Water Districts projects and programs, including a total maximum daily load (TMDL) implementation strategy or on-site sewage management programs
- **Climate Change Mitigation, Adaption, and Implementation of Programs and Plans** - Account for the effects of climate change by appropriately mitigating or adapting projects, programs, local ordinances, and regulations. Enable Strait ERN member organizations to implement local climate change programs and plans.
- **Critical Areas Ordinances** - Update, implement, and enforce Critical Areas Ordinances
- **Forest Practices** - Implement sustainable and ecologically sound forest practices on public and private timberlands.
- **Green Jobs** - Promote ecosystem-based “Green Jobs” and businesses
- **Landfill Assessments, Closure, and Remediation** - Assess, close, and remediate, where necessary, solid waste landfills within the Strait of Juan de Fuca Action Area

- **Local Recovery Capacity** - Build local capacity of the Strait ERN and its active member organizations to strategically plan, collaborate, and coordinate; obtain funding; update, manage, and implement programs and projects; and enforce local codes and ordinances throughout the Strait Action Area
- **Marine Resource Plans (Clallam and Jefferson MRCs)** - Implement Marine Resources Committee's (MRC's) Action Plan for Clallam and Jefferson counties and Northwest Strait Commission Regional Projects
- **Migration Corridor Integrity** - Protect and restore the Strait of Juan de Fuca Action Area (including its marine, estuarine, and fresh waters) as a migratory corridor for fish, marine birds, orcas, and other species
- **Non-Indigenous Species Programs** - Promote programs and projects that prevent or reduce the effects of bio-Invasions of marine (including from ballast water), freshwater, or terrestrial non-indigenous species
- **Outreach, Education, Public Involvement: A. Strait ECO Net** - Support the efforts of Strait ECO Net to provide consistent and coordinated outreach, education and involvement opportunities for the general public; **B. Technical Assistance** - Support the efforts of the Conservation Districts and others to provide technical assistance to homeowners, landowners, and businesses; Support efforts to provide locally available professional training opportunities; **C. BuiltGreen™** - Support the effort to promote and market BuiltGreen™ development, particularly LID, toxics reduction, energy savings, and sustainable and regenerative power and water practices.
- **Port Angeles Harbor Ecosystem Recovery** - Clean up and restore Port Angeles Harbor and waterfront
- **Sewage Discharges (Treated and Untreated)** - Reduce harmful discharges of pollutants from ships, sewage outfalls, and biosolids applications.
- **Sustainable Commercial, Tribal, and Recreational Fishing and Shellfishing** - Promote the sustainable harvest of finfish and shellfish.
- **Toxic Source Reduction Programs** - Improve, develop, and implement toxics source reduction programs and projects.
- **Watershed Planning Detailed Implementation Plan Development and Implementation (WRIAs 19, 18 West, 18 East, and 17)** - Develop and/or implement Watershed Planning (2514) Detailed Implementation Plans (DIPs) for WRIAs 19, 18 West, 18 East, and 17
- **Working Lands and Tidelands Protection** - Protect (long term); support stewardship; and promote sustainable and ecologically sound principles and practices for working farms, forests, and aquaculture/mariculture operations.

The "Strait ERN 2011-13 Biennial Work Plan, Appendix A2, Strait ERN Priority Actions" contains a comprehensive list of actions for all 25 strategic priorities identified by the Strait ERN. This list includes the sequencing (or prioritization) of specific actions, where possible, under each strategic priority. The list also includes possible lead government/ agency/ organizations and the estimated funding needed, if available, for the 2011-13 biennium for each specific action. For the purposes of the Action Agenda update, the Strait ERN considers the multiple specific actions listed under each of the top six strategic priorities to constitute "packaged local near-term actions" (Packaged LNTA). For example, the three specific actions listed under the first strategic priority, "Elwha River Ecosystem Recovery" all roll up as a Packaged LNTA. The six Packaged LNTAs are listed below. For more details on each of the specific actions, see the latest revision of Appendix 2 of the Strait ERN 2011-13 Biennial Work Plan available from the weblink below.

"PACKAGED" LNTA (ID#) ¹	POSSIBLE LEAD GOVERNMENT, AGENCY, AND/OR ORGANIZATION	POTENTIAL FUNDING SOURCE(S)	PROPOSED PERFORMANCE MEASURE ¹
Elwha River Ecosystem Recovery (ID #6) a. Stock preservation and weir operation b. Monitoring (adults, juveniles, smolts) c. Habitat restoration projects	Elwha Fish Committee partners and others	SRFB, PSAR, EPA Lead Organizations	Continuous weir operation and monitoring of salmonids (adults, juveniles, and smolts) on the Elwha River (<i>i.e.</i> Priority Action ID#s 6a and 6b)
Salmon Recovery Plans (ID#18) a. North Olympic Peninsula Lead Entity (NOPL) 3-year Work Plan b. NOPL Elwha revegetation project c. NOPL Dungeness River floodplain restoration, Phase II d. NOPL Elwha Engineered Log Jams e. Hood Canal Coordinating Council (HCCC) Lead Entity (LE) 3-year Work Plan f. HCCC LE Snow Creek and Salmon Creek estuary restoration	North Olympic Peninsula Lead Entity, Hood Canal Lead Entity, and their respective member organizations	SRFB, PSAR, EPA Lead Organizations (Components: Watershed Protection and Restoration; Marine and Nearshore Protection and Restoration; and Toxics and Nutrients Prevention, Reduction, and Control)	Initiate or significantly advance all of the four specific Priority Actions identified by the Strait ERN for the Strait Action Area (<i>i.e.</i> Priority Action ID#s 18b, 18c, 18d, and 18f)
Oil Spill Prevention, Preparedness, and Response (ID#15) * - Implement and promote improvements in oil spill prevention, preparedness, and response programs and capabilities for the benefit of the Strait of Juan de Fuca and adjacent waters. <ul style="list-style-type: none"> • a. Improve transboundary coordination on oil spills b. Establish Vessel of Opportunity Program in Neah Bay c. Expand oil spill drills along Strait of Juan de Fuca and Coast • • *See insert for information on progress and ongoing work on oil spill issues, and details on the specific actions listed above for this Packaged LNTA. 	a. Makah Tribe, Ecology, Industry, U.S. Coast Guard, and Navy b. Strait ERN, U.S. and Canadian Coast Guards, Ecology, Canadian Department of Fisheries and Oceans (DFO), and Transport Canada c. Strait ERN, U.S. and Canadian Coast Guards, Ecology, DFO, Transport Canada, U.S. Congress, and U.S. State Department	Ecology and EPA Lead Organizations, U.S. Coast Guard, and Industry	<i>In sequence:</i> a. Ensure 1+ CANUSPAC Exercise (or deployment) is conducted and incorporates transboundary movement of personnel and/or equipment b. Vessel of Opportunity established in Neah Bay by July 2014 or referenced in contingency plans approved by April 2014

"PACKAGED" LNTA (ID#) ¹	POSSIBLE LEAD GOVERNMENT, AGENCY, AND/OR ORGANIZATION	POTENTIAL FUNDING SOURCE(S)	PROPOSED PERFORMANCE MEASURE ¹
			c. Strait ERN participates in worst case or deployment drill planning process
Shoreline Master Program (SMP) Updates, Implementation, and Intergovernmental Coordination (Jefferson County, Clallam County and cities of Port Townsend, Sequim, and Port Angeles) (ID#20) <ol style="list-style-type: none"> City of Port Townsend SMP – stormwater education City of Port Townsend SMP – bulkhead removal City of Port Townsend SMP – restore native marine riparian vegetation City of Port Angeles SMP Update City of Sequim SPM Update Jefferson County SMP – Annual Restoration Planning Summit Jefferson County SMP – Assess shoreline restoration progress Jefferson County SMP – Identify and implement shoreline armoring, riparian enhancement, fill removal and culvert replacement projects Jefferson County SMP update Clallam County SMP implementation Clallam County SMP adaptive management Clallam County SMP update Ecosystem valuation Enhanced shoreline protection Finfish aquaculture speaker forum 	Clallam and Jefferson counties and Cities of Port Angeles, Sequim, and Port Townsend, and others	EPA Lead Organizations (Components: Watershed Protection and Restoration; Marine and Nearshore Protection and Restoration)	<p>Recommended Option: Develop the economic baseline (Ecosystem Valuation) for the ecosystem functions that will be monitored by the No Net Loss indicators for <u>all</u> 5 local jurisdictions within the Strait Action Area (Priority Action ID# 20m).</p> <p>Alternative Option: Initiate or complete 30% of the <u>new</u> Priority Actions identified by the Strait ERN for the Strait Action Area (i.e., Priority Action ID#s 20a, 20b, 20c, 20f, 20g, 20h, 20j, 20k, and 20m)</p>
Stormwater Management Program Updates and Implementation (Clallam, Jefferson, Port Angeles, Sequim, and Port Townsend) (ID#21) <ol style="list-style-type: none"> City of Port Townsend Stormwater Management Plan City of Sequim Stormwater Management Plan City of Port Angeles CSO reduction City of Port Angeles NPDES Stormwater Management Program implementation Jefferson County Public Education Plan implementation 	Clallam and Jefferson counties and Cities of Port Angeles, Sequim, and Port Townsend, and others	EPA Lead Organizations (Components: Watershed Protection and Restoration; Marine and Nearshore Protection and Restoration; and Toxics and Nutrients Prevention, Reduction, and	<p>Recommended Option: Adoption of LID incentives and ordinances by <u>all</u> 5 Strait Action Area local jurisdictions (i.e., Priority Action ID#s 21a, 21b, 21d, 21f, 21g, 21h, 21k, and 21m)</p> <p>Alternative Option:</p>

"PACKAGED" LNTA (ID#) ¹	POSSIBLE LEAD GOVERNMENT, AGENCY, AND/OR ORGANIZATION	POTENTIAL FUNDING SOURCE(S)	PROPOSED PERFORMANCE MEASURE ¹
f. Jefferson County low impact development and BMP staff training g. Jefferson County low impact development and BMP training for development community h. Clallam County stormwater technical assistance i. Clallam County outreach and education j. Clallam County stormwater monitoring a data analysis k. Clallam County Stormwater management staff training l. Clallam County land use analysis m. Clallam County Stormwater Management Plan n. Stormwater impacts reduction from roads speaker forum		Control)	Initiate or complete 25% of the <u>new</u> Priority Actions identified by the Strait ERN for the Strait Action Area (i.e., 21b, 21e, 21f, 21h, 21i, 21j, 21k, 21l, and 21n)
Instream Flow Rules (WRIA 17, WRIA 18 East, WRIA 18 West, and WRIA 19) (ID#9) a. Adopt and implement Dungeness Instream Flow and Water Management Rule b. WRIA 18 East stream flow improvements c. Implement WRIA 17 Instream Flow and Water Management Rule d. Adopt Instream Flow Rules for WRIA 18 West e. Adopt Instream Flow Rules for WRIA 19	Washington Department of Ecology and local watershed management organizations (i.e., WRIAs 19, Elwha Morse Management Team, Dungeness River Management Team, and East Jefferson Watershed Council) and their respective member organizations	Ecology	Initiate or complete 66% of the Priority Actions identified by the Strait ERN for the Strait Action Area (i.e., Priority Action ID#s 9a, 9b, and 9c)

¹ ID# refers to the Strait ERN Strategic Priority identification number as used in the Strait ERN 2011-13 Biennial Work Plan.

Oil Spill Prevention, Preparedness, and Response (ID#15) - Progress on a number of key actions, initially identified by the Strait ERN for the Oil Spill Prevention, Preparedness, and Response Strategic Priority, include:

- Permanent stationing of the Neah Bay Response Tug
- Strait ERN presence on various committees through the Makah Tribe's appointment to and participation in the Region 10 Regional Response Team/Northwest Area Committee (RRT/NWAC), Cross Partnership Oil Spill Workgroup (along with Clallam County Commissioner Doherty), and the oil spill advisory group established by Ecology to oversee rulemaking required by SB 1186

- Establishing a liaison role with Incident Command during a spill event for the Strait ERN through the Makah Tribe's appointment to the RRT; and
- Makah Tribe's participation in the U.S. and Canadian Coast Guards annual joint spill response exercises, known as CANUSPAC, along the Strait and Coast, that also proved instrumental in calling for an update of oil spill capabilities across the international boarder within the U.S. Coast Guard Reauthorization. Tribal participation to improve trans-boundary coordination, however, remains a priority for this biennium.

While the progress outlined above is clearly noteworthy, a number of ongoing needs remain, including:

- Updating and "ground-truthing" the Geographic Response Plans (GRP) through a rigorous drill program that would also incorporate vessels of opportunity and volunteers, as called for in SB 1186. In addition, work to assure that information contained within existing GRPs is being incorporated into updates of local Shoreline Master Programs, and visa versa, needs to be accomplished
- Continued funding for HAZWOPER, the Incident Command System, and Oiled Wildlife classes for volunteers across Strait Action Area, historically sponsored by the Clallam Marine Resources Committee (MRC), in cooperation with the Jefferson MRC; and
- Continued support for publicly funded oil spill response equipment caches strategically located throughout Strait Action Area, and funding for routine training in the use of that equipment.

Three specific actions, considered to be of highest priority, remain for this biennium's Strait ERN Oil Spill Preparedness, Prevention, and Response, Packaged LNTA (C10.2 LNTA #1), including the:

- **Neah Bay Vessel of Opportunity Program (ID#15c)** – The Port of Neah Bay (Port), strategically located at the junction between the Strait of Juan de Fuca and the outer Coast, is defined as a spill response "staging area" in the State's Oil Spill Contingency Plan. With the Makah Fishing Fleet, government and industry spill response assets, and the emergency rescue tug all stationed at the Port, it offers an ideal location to develop a Vessel Of Opportunity (VOO) program. The value of such a critical enhancement to the region's response capacity was recognized in an April 20, 2011 letter from the Governor to Ecology's Director, Ted Sturdevant. The Strait ERN supports establishment of a VOO program in Neah Bay as part of SB 1186, as well as additional programs along the Strait of Juan de Fuca (i.e., Port of Port Angeles and Port Townsend). Establishment of a Neah Bay VOO also furthers implementation of the U.S. Coast Guard Reauthorization Act of 2010 calling for a Neah Bay Pilot Project. This work is particularly important to accomplish over the next biennium as the U.S. Coast Guard will be moving the High Volume Port Line from Port Angeles to Cape Flattery in July 2012, thereby requiring more response capability in the western strait and outer coast region.
- **Expansion of oil spill drills along the Strait and Coast (ID#15g)** – The Strait of Juan de Fuca is the busiest commercial maritime waterway in Washington State for it receives traffic bound to and from the third largest port-complex in the U.S. as well as Canada's largest port. The rapid growth of tar sand oil being exported from the Port of Vancouver has significantly increased the risk of a large spill in the region. These unconventional oils will require unique response techniques to be developed. In addition, a proposed coal terminal near Bellingham will also significantly increase traffic of ships twice the size of tankers allowed to ply these waters. For these reasons, it is critical that worst-case oil spill exercises, including equipment deployment, be conducted regularly in this region. The combined spill response assets housed in Neah Bay

and Port Angeles afford substantial opportunities to drill. In addition, coordinating efforts with the Northwest Maritime Center (Port Townsend, WA) to host and expand drills and table-top exercises along the Strait of Juan de Fuca, outer Coast, and Puget Sound waterways, utilizing their Pilothouse/Oil Spill Training Center (currently under construction), should be considered. Drills and exercises should also incorporate vessels of opportunity, publicly funded response equipment caches, and maritime industry participants. All of these assets are owned by different organizations, that if drilled together, would afford opportunities to improve efficiencies through coordination.

- **Improved Trans-boundary coordination on oil spills (ID#15b)** – Recognizing that the majority of the Strait of Juan de Fuca is bordered by Canada, it is critical that we continue to exercise our combined spill response capacity in this region. The Strait ERN supports enhancement of CANUSPAC, on both sides of the border with additional equipment and personnel. These exercises primarily involve drilling the procedures necessary to bring a limited amount of response assets across the border. In addition, the U.S. Coast Guard Reauthorization Act called for the two countries to reevaluate the comparability of spill response, tug escort, and rescue towing assets on either side of the border as discussed in the Combined Vessel Traffic Service Treaty. It is expected that this effort will commence this biennium. The British Columbia/Pacific States Oil Spill Task Force has already documented the disparity of spill response capacity across the border. The completion of this review would serve to significantly improve our region's combined capabilities. Additionally, the current estimates of Canadian vessel traffic projections need to be incorporated into updates of vessel traffic risk assessments.

Relationship to Recovery Targets

The Strait ERN worked to link the local threats and strategic priorities (listed above) with the Soundwide pressure reduction targets (land development, wastewater, shoreline alteration, stormwater, and floodplains). Those linkages are illustrated in the following table.

SOUNDWIDE PRESSURE REDUCTION TARGET CATEGORY	LOCAL THREAT	LOCAL STRATEGIC PRIORITIES
Land Development	New (Shoreline and) Upland Modifications that Damage Intact Habitat and Habitat Forming Processes	<ul style="list-style-type: none"> • Critical Areas Ordinances • Outreach, Education, Public Involvement - B. Technical Assistance • Outreach, Education, Public Involvement - C. BuiltGreen™ • Salmon Recovery Plans • SMP Updates, Implementation, and Intergovernmental Coordination • Working Lands and Tidelands Protection
	Legacy Infrastructure – Large Scale	<ul style="list-style-type: none"> • Elwha River Ecosystem Recovery • Forest Practices • Landfill Assessments, Closure, and Remediation • Marine Resource Plans • Migration Corridor Integrity * • Port Angeles Harbor Ecosystem Recovery • Salmon Recovery Plans

SOUNDWIDE PRESSURE REDUCTION TARGET CATEGORY	LOCAL THREAT	LOCAL STRATEGIC PRIORITIES
	Land Use Conversions of Farms and Forests to Other Uses	<ul style="list-style-type: none"> • Climate Change Mitigation, Adaption, and Implementation of Programs and Plans • Outreach, Education, Public Involvement - B. Technical Assistance • Salmon Recovery Plans • Watershed Planning Detailed Implementation Plans • Working Lands and Tidelands Protection
	Water Withdrawals and Diversions	<ul style="list-style-type: none"> • Carlsborg Wastewater Treatment and Water Reuse • Climate Change Mitigation, Adaption, and Implementation of Programs and Plans • Instream Flow Rules • Outreach, Education, Public Involvement - B. Technical Assistance • Salmon Recovery Plans • Watershed Planning Detailed Implementation Plans • Working Lands and Tidelands Protection
Shoreline Alteration	New Shoreline (and Upland) Modifications that Damage Intact Habitat and Habitat Forming Processes	<ul style="list-style-type: none"> • Aquatic Resources Habitat Conservation Plans * • Climate Change Mitigation, Adaption, and Implementation of Programs and Plans • Critical Areas Ordinances • Marine Resource Plans • Migration Corridor Integrity * • Outreach, Education, Public Involvement - C. BuiltGreen™ • Salmon Recovery Plans • SMP Updates, Implementation, and Intergovernmental Coordination • Working Lands and Tidelands Protection
Stormwater	Surface Water Loading and Runoff from the Built Environment	<ul style="list-style-type: none"> • Clean Water District Plans • Climate Change Mitigation, Adaption, and Implementation of Programs and Plans • Instream Flow Rules • Outreach, Education, Public Involvement - B. Technical Assistance • Outreach, Education, Public Involvement - C. BuiltGreen™ • Stormwater Management Program Updates and Implementation • Watershed Planning Detailed Implementation Plan • Working Lands and Tidelands Protection
Wastewater	Human Sewage	<ul style="list-style-type: none"> • Carlsborg Wastewater Treatment and Water Reuse • Clean Water District Plans • Outreach, Education, Public Involvement - B. Technical Assistance • Stormwater Management Program Updates and Implementation • Watershed Planning Detailed Implementation Plan
Floodplains	New Shoreline and Upland Modifications that Damage Intact Habitat	<ul style="list-style-type: none"> • Climate Change Mitigation, Adaption, and Implementation of Programs and Plans • Critical Areas Ordinances • Migration Corridor Integrity * • Salmon Recovery Plans

SOUNDWIDE PRESSURE REDUCTION TARGET CATEGORY	LOCAL THREAT	LOCAL STRATEGIC PRIORITIES
	and Habitat Forming Processes	<ul style="list-style-type: none"> • SMP Updates, Implementation, and Intergovernmental Coordination • Working Lands and Tidelands Protection
	Legacy Infrastructure – Large Scale	<ul style="list-style-type: none"> • Climate Change Mitigation, Adaption, and Implementation of Programs and Plans • Elwha River Ecosystem Recovery • Forest Practices • Migration Corridor Integrity * • Salmon Recovery Plans • SMP Updates, Implementation, and Intergovernmental Coordination
	Land Use Conversions of Farms and Forests to Other Uses	<ul style="list-style-type: none"> • Climate Change Mitigation, Adaption, and Implementation of Programs and Plans • Critical Areas Ordinances • Salmon Recovery Plans • Working Lands and Tidelands Protection
	Climate Change Induced Stressors	<ul style="list-style-type: none"> • Climate Change Mitigation, Adaption, and Implementation of Programs and Plans • Critical Areas Ordinances • Salmon Recovery Plans • SMP Updates, Implementation, and Intergovernmental Coordination • Working Lands and Tidelands Protection

* Specific Priority Actions remain to be determined for this Local Strategic Priority at a future Strait ERN Speaker Forum.

The Strait ERN also worked to link the local threats and strategic priorities (listed above) with other regional ecosystem pressures. While these ecosystem pressures may not have a Soundwide Pressure Reduction Target at this time, they are considered important to the Strait Action Area. Those linkages are illustrated in the following table.

OTHER REGIONAL ECOSYSTEM PRESSURES	LOCAL THREAT	LOCAL STRATEGIC PRIORITIES
Agriculture, Livestock Grazing	Agriculture and Livestock Grazing Operations	<ul style="list-style-type: none"> • Clean Water District Plans • Climate Change Mitigation, Adaption, and Implementation of Programs and Plans • Instream Flow Rules • Outreach, Education, Public Involvement - B. Technical Assistance • Salmon Recovery Plans • Watershed Planning Detailed Implementation Plan • Working Lands and Tidelands Protection
Animal Harvesting (Aquatic)	Unsustainable Fishing/Harvesting	<ul style="list-style-type: none"> • Sustainable Commercial, Tribal, and Recreational Fishing and Shellfishing *

OTHER REGIONAL ECOSYSTEM PRESSURES	LOCAL THREAT	LOCAL STRATEGIC PRIORITIES
Climate Change and Severe Weather	Climate Change Induced Stressors	<ul style="list-style-type: none"> • Climate Change Mitigation, Adaption, and Implementation of Programs and Plans • Instream Flow Rules • Marine Resource Plans • Outreach, Education, Public Involvement - B. Technical Assistance • Outreach, Education, Public Involvement - C. BuiltGreen™ • Salmon Recovery Plans • SMP Updates, Implementation, and Intergovernmental Coordination • Stormwater Management Program Updates and Implementation • Watershed Planning Detailed Implementation Plan • Working Lands and Tidelands Protection
Derelict Fishing Gear	Derelict Gear and Vessels	<ul style="list-style-type: none"> • Marine Resource Plans • Migration Corridor Integrity * • Sustainable Commercial, Tribal, and Recreational Fishing and Shellfishing *
Energy Production and Energy Emissions	Air Pollution and Atmospheric Deposition	<ul style="list-style-type: none"> • Climate Change Mitigation, Adaption, and Implementation of Programs and Plans • Outreach, Education, Public Involvement - C. BuiltGreen™ • Toxic Source Reduction * • Working Lands and Tidelands Protection
Fin Fish Aquaculture and Shellfish Aquaculture	Aquaculture	<ul style="list-style-type: none"> • Aquatic Resources Habitat Conservation Plans * • Migration Corridor Integrity * • Non-Indigenous Species Programs * • SMP Updates, Implementation, and Intergovernmental Coordination • Working Lands and Tidelands Protection *
Invasive Species (Aquatic and Terrestrial)	Invasive Species and Other Problematic Species (Terrestrial, Freshwater, Estuarine, Marine)	<ul style="list-style-type: none"> • Non-Indigenous Species Programs * • Salmon Recovery Plans • Working Lands and Tidelands Protection
Oil and Hazardous Materials Spills	Oil and Hazardous Materials Spills - Large Scale	<ul style="list-style-type: none"> • Oil Spill Prevention, Preparedness, and Response
Timber Production	Timber Harvest and Silvicultural Operations - Large Scale	<ul style="list-style-type: none"> • Climate Change Mitigation, Adaption, and Implementation of Programs and Plans • Forest Practices • Salmon Recovery Plans • Working Lands and Tidelands Protection

OTHER REGIONAL ECOSYSTEM PRESSURES	LOCAL THREAT	LOCAL STRATEGIC PRIORITIES
Toxics and Legacy Contaminants	Legacy Toxic Contamination Sources - Large Scale	<ul style="list-style-type: none"> • Landfill Assessments, Closure, and Remediation • Port Angeles Harbor Ecosystem Recovery • Toxic Source Reduction *
Transportation and Service Corridors	Marine Commercial Vessel Traffic Hazards	<ul style="list-style-type: none"> • Non-Indigenous Species Programs * • Sewage Discharges (Treated and Untreated) * • Toxic Source Reduction *

* Specific Priority Actions remain to be determined for this Local Strategic Priority at a future Strait ERN Speaker Forum.

In addition, the Strait ERN identified the following ecosystem targets of local interest as well as local contributions to the targets.

ECOSYSTEM TARGETS OF LOCAL INTEREST	LOCAL CONTRIBUTIONS TO SOUNDWIDE RECOVERY
Swimming Beaches	<ul style="list-style-type: none"> • Clean Water District Plans • Outreach, Education, Public Involvement - B. Technical Assistance • Port Angeles Harbor Ecosystem Recovery • Sewage Discharges (Treated and Untreated) • Stormwater Management Program Updates/Implementation • Toxic Source Reduction * • Watershed Planning Detailed Implementation Plans
Summer Stream Flows	<ul style="list-style-type: none"> • Carlsborg Wastewater Treatment and Water Reuse • Climate Change Mitigation/Adaption/Implement Programs&Plans • Instream Flow Rules • Outreach, Education, Public Involvement - B. Technical Assistance • Outreach, Education, Public Involvement - C. BuiltGreen™ • Salmon Recovery Plans • Stormwater Management Program Updates and Implementation • Watershed Planning Detailed Implementation Plans • Working Lands (and Tidelands) Protection
Water Insects in Freshwater	<ul style="list-style-type: none"> • Carlsborg Wastewater Treatment and Water Reuse • Clean Water District Plans • Climate Change Mitigation/Adaption/Implement Programs & Plans • Critical Areas Ordinances • Forest Practices • Instream Flow Rules • Non-Indigenous Species Programs * • Outreach, Education, Public Involvement - B. Technical Assistance • Outreach, Education, Public Involvement - C. BuiltGreen™ • Salmon Recovery Plans • SMP Updates, Implementation & Intergovernmental Coordination • Stormwater Management Program Updates and Implementation • Watershed Planning Detailed Implementation Plans

ECOSYSTEM TARGETS OF LOCAL INTEREST	LOCAL CONTRIBUTIONS TO SOUNDWIDE RECOVERY
	<ul style="list-style-type: none"> • Working Lands (and Tidelands) Protection
Toxics in Fish	<ul style="list-style-type: none"> • Landfill Assessments, Closure, and Remediation • Oil Spill Prevention, Preparedness, and Response • Port Angeles Harbor Ecosystem Recovery • Sewage Discharges (Treated and Untreated) * • Stormwater Management Program Updates & Implementation • Toxic Source Reduction *
Freshwater Water Quality	<ul style="list-style-type: none"> • Carlsborg Wastewater Treatment and Water Reuse • Clean Water District Plans • Forest Practices • Outreach, Education, Public Involvement - B. Technical Assistance • Outreach, Education, Public Involvement - C. BuiltGreen™ • Salmon Recovery Plans • SMP Updates, Implementation & Intergovernmental Coordination • Stormwater Management Program Updates and Implementation • Toxic Source Reduction * • Watershed Planning Detailed Implementation Plan • Working Lands and Tidelands Protection
Estuaries	<ul style="list-style-type: none"> • Aquatic Resources Habitat Conservation Plans * • Climate Change Mitigation/Adaption/Implement Programs & Plans • Critical Areas Ordinances • Elwha River Ecosystem Recovery • Marine Resource Plans • Migration Corridor Integrity * • Port Angeles Harbor Ecosystem Recovery • Salmon Recovery Plans • SMP Updates, Implementation & Intergovernmental Coordination • Working Lands and Tidelands Protection
Marine Sediment Quality	<ul style="list-style-type: none"> • Aquatic Resources Habitat Conservation Plans * • Clean Water District Plans • Landfill Assessments, Closure, and Remediation • Marine Resource Plans • Oil Spill Prevention, Preparedness, and Response • Port Angeles Harbor Ecosystem Recovery • Sewage Discharges (Treated and Untreated) * • SMP Updates, Implementation & Intergovernmental Coordination • Stormwater Management Program Updates and Implementation • Toxic Source Reduction *
Eelgrass	<ul style="list-style-type: none"> • Aquatic Resources Habitat Conservation Plans * • Clean Water District Plans • Climate Change Mitigation/Adaption/Implement Programs & Plans • Critical Areas Ordinances • Elwha River Ecosystem Recovery • Marine Resource Plans • Migration Corridor Integrity *

ECOSYSTEM TARGETS OF LOCAL INTEREST	LOCAL CONTRIBUTIONS TO SOUNDWIDE RECOVERY
	<ul style="list-style-type: none"> • Non-Indigenous Species Programs * • Oil Spill Prevention, Preparedness, and Response • Port Angeles Harbor Ecosystem Recovery • Salmon Recovery Plans • SMP Updates, Implementation & Intergovernmental Coordination • Stormwater Management Program Updates and Implementation • Working Lands and Tidelands Protection
Floodplains	<ul style="list-style-type: none"> • Climate Change Mitigation/Adaption/Implement Programs & Plans • Critical Areas Ordinances • Elwha River Ecosystem Recovery • Forest Practices • Outreach, Education, Public Involvement - B. Technical Assistance • Salmon Recovery Plans • SMP Updates, Implementation, Intergovernmental Coordination • Watershed Planning Detailed Implementation Plan • Working Lands and Tidelands Protection
Wild Chinook Salmon (Note: Chinook abundance target should be considered as a surrogate for all other populations of salmonids)	<ul style="list-style-type: none"> • Aquatic Resources Habitat Conservation Plans * • Carlsborg Wastewater Treatment and Water Reuse • Clean Water District Plans • Climate Change Mitigation/Adaption/Implement Programs & Plans • Critical Areas Ordinances • Elwha River Ecosystem Recovery • Forest Practices • Instream Flow Rules • Marine Resource Plans • Migration Corridor Integrity * • Non-Indigenous Species Programs * • Oil Spill Prevention, Preparedness, and Response • Outreach, Education, Public Involvement - B. Technical Assistance • Outreach, Education, Public Involvement - C. BuiltGreen™ • Port Angeles Harbor Ecosystem Recovery • Salmon Recovery Plans • SMP Updates, Implementation, Intergovernmental Coordination • Stormwater Management Program Updates and Implementation • Sustainable Commercial, Tribal, Recreational Fishing • Toxic Source Reduction * • Watershed Planning Detailed Implementation Plan • Working Lands and Tidelands Protection
Shoreline Armoring	<ul style="list-style-type: none"> • Aquatic Resources Habitat Conservation Plans * • Climate Change Mitigation/Adaption/Implement Programs & Plans • Critical Areas Ordinances • Elwha River Ecosystem Recovery • Landfill Assessments, Closure, and Remediation • Marine Resource Plans • Migration Corridor Integrity * • Outreach, Education, Public Involvement - C. BuiltGreen™

ECOSYSTEM TARGETS OF LOCAL INTEREST	LOCAL CONTRIBUTIONS TO SOUNDWIDE RECOVERY
	<ul style="list-style-type: none"> • Port Angeles Harbor Ecosystem Recovery • Salmon Recovery Plans • SMP Updates, Implementation, Intergovernmental Coordination • Working Lands and Tidelands Protection
Mgt. of On-Site Sewage Systems	<ul style="list-style-type: none"> • Carlsborg Wastewater Treatment and Water Reuse • Clean Water District Plans • Marine Resource Plans • Toxic Source Reduction * • Watershed Planning Detailed Implementation Plan
Pacific Herring	<ul style="list-style-type: none"> • Aquatic Resources Habitat Conservation Plans * • Clean Water District Plans • Climate Change Mitigation/Adaption/Implement Programs & Plans • Critical Areas Ordinances • Elwha River Ecosystem Recovery • Marine Resource Plans • Migration Corridor Integrity * • Non-Indigenous Species Programs * • Oil Spill Prevention, Preparedness, and Response • Port Angeles Harbor Ecosystem Recovery • Salmon Recovery Plans • SMP Updates, Implementation, Intergovernmental Coordination • Sustainable Commercial, Tribal, and Recreational Fishing *
Shellfish Beds	<ul style="list-style-type: none"> • Aquatic Resources Habitat Conservation Plans * • Clean Water District Plans • Climate Change Mitigation/Adaption/Implement Programs & Plans • Critical Areas Ordinances • Elwha River Ecosystem Recovery • Landfill Assessments, Closure, and Remediation • Marine Resource Plans • Migration Corridor Integrity * • Non-Indigenous Species Programs * • Oil Spill Prevention, Preparedness, and Response • Port Angeles Harbor Ecosystem Recovery • SMP Updates, Implementation, Intergovernmental Coordination • Stormwater Management Program Updates and Implementation • Sustainable Commercial, Tribal, and Recreational Fishing * • Toxic Source Reduction * • Working Lands and Tidelands Protection
Orca	<ul style="list-style-type: none"> • Aquatic Resources Habitat Conservation Plans * • Climate Change Mitigation/Adaption/Implement Programs & Plans • Critical Areas Ordinances • Elwha River Ecosystem Recovery • Forest Practices • Instream Flow Rules • Landfill Assessments, Closure, and Remediation

ECOSYSTEM TARGETS OF LOCAL INTEREST	LOCAL CONTRIBUTIONS TO SOUNDWIDE RECOVERY
	<ul style="list-style-type: none"> • Marine Resource Plans • Migration Corridor Integrity * • Non-Indigenous Species Programs * • Oil Spill Prevention, Preparedness, and Response • Port Angeles Harbor Ecosystem Recovery • Salmon Recovery Plans (Note: likely not a linear relationship) • Sewage Discharges (Treated and Untreated) * • SMP Updates, Implementation, Intergovernmental Coordination • Stormwater Management Program Updates and Implementation • Toxic Source Reduction * • Watershed Planning Detailed Implementation Plan • Working Lands and Tidelands Protection
Dissolved Oxygen in Marine Waters (Note: Low DO Target is focused on Port Angeles Harbor.)	<ul style="list-style-type: none"> • Climate Change Mitigation/Adaption, Implement Programs & Plans • Port Angeles Harbor Ecosystem Recovery • Sewage Discharges (Treated and Untreated) * • Stormwater Management Program Updates and Implementation • Toxic Source Reduction *

* Specific Priority Actions remain to be determined for this Strategic Priority at a future Strait ERN Speaker Forum.

Local Implementation Structure

Starting in 2009, the Strait ERN worked to identify local treats, priorities, and near-term actions. As part of that work, the Strait ERN held nine Speaker Forums at quarterly meetings (as of January 2012) to gain background information on strategic topics, including:

- Oil Spill Preparedness, Prevention, and Response
- Multi-State Agency Watershed Characterization Project
- Aquatic Lands Habitat Conservation Plan
- Forest Practices Habitat Conservation Plan
- Climate Change Adaption
- NOAA Biological Opinion / FEMA National Floodplain Insurance Program – Local Implementation
- Strait of Juan de Fuca as a Migratory Corridor for Salmonids
- Net Pen Aquaculture (issue tabled for now); and
- Diarrhetic Shellfish Poisoning

IMPLEMENTATION COORDINATION IN THE STRAIT OF SAN JUAN DE FUCA

The Strait ERN covers the Strait Action Area. The LIO, which officially formed in 2009, is made up of leaders (i.e., elected officials and high-level staff) from a diverse set of governments, agencies, special districts, organizations, recovery processes, institutions, and key businesses and business groups in the Strait of Juan de Fuca Action Area. The LIO's co-chairs are the Strait Action Area's representative and the alternate to the Partnership's Ecosystem Coordination Board. The LIO is guided by a Steering Group. The LIO forms Task Force groups, made up of volunteers from the membership, as needed to focus on implementing local strategies and actions.

Participants in or contributors to this process included the following:

- **Tribes** – Makah, Lower Elwha Klallam, Jamestown S’Klallam, and Port Gamble S’Klallam
- **Counties** – Clallam and Jefferson
- **Cities** – Port Angeles, Sequim, and Port Townsend
- **Port** – Port Angeles, Neah Bay
- **Government Entities / Agencies** – Clallam and Jefferson Conservation Districts, Hood Canal Coordinating Council (HCCC), Point-No-Point Treaty Council, Puget Sound Partnership, Washington Departments of Fish and Wildlife, Ecology, and Natural Resources, US Coast Guard Sector Seattle, and Olympic Coast National Marine Sanctuary
- **Watershed Management, Salmon Recovery, and Marine Organizations** – North Olympic Lead Entity for Salmon and HCCC-Lead Entity (for salmon recovery), Management Teams or Councils for Watershed Resource Inventory Areas 19, 18 (including Elwha-Morse Management Team and Dungeness River Management Team), and 17 (East Jefferson Watershed Council), and Clallam and Jefferson Marine Resources Committees, a part of the Northwest Straits Commission, Sequim-Dungeness Clean Water District, and Sunland Water District
- **Business-Based Non-Governmental Organizations** - North Olympic Timber Action Committee, Pacific Shellfish Growers Association, North Peninsula Home Builders Association - BuiltGreen™ of Clallam County, Multi-Vision Integration LLC, and Northwest Maritime Center
- **Natural Resource-Based and Working Land Preservation Non-Governmental Organizations (with wide Strait of Juan de Fuca geographic coverage)** - North Olympic Salmon Coalition, North Olympic Land Trust, Jefferson Land Trust, Olympic Environmental Council, Protect the Peninsula’s Future, People for Puget Sound, North Olympic Peninsula Group of the Sierra Club, and Coastal Watershed Institute
- **Educational Institutions** - WSU Jefferson County Extension, Washington Sea Grant
- **Place-Based Educational / Public Involvement Organizations** – Strait ECO Net, Feiro Marine Science Center, Dungeness River Audubon Center, and Port Townsend Marine Science Center
- **Volunteer-Based Public Involvement Organizations** – Washington State University Clallam and Jefferson County Beach Watchers/Water Watchers and Shore Stewards and Clallam County Streamkeepers

References and Additional Resources

Strait Ecosystem Recovery Network 2011-13 Biennial Work Plan. Available online at:

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